

# First record of *Phyllostomus elongatus* (É. Geoffroy, 1810) (Mammalia: Chiroptera) for the state of Espírito Santo, southeastern Brazil

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**ABSTRACT:** We report the occurrence of *Phyllostomus elongatus* in the municipality of Linhares, state of Espírito Santo. The new record fills a gap in the distribution of the species in southeastern Brazil and increases the state's mammal list.

*Phyllostomus* Lacépède, 1799 is widely distributed in Central and South America, being represented by four medium to large-sized species (forearms from 58 to 88 mm): *Phyllostomus discolor* (Wagner, 1843), *Phyllostomus elongatus* (É. Geoffroy, 1810), *Phyllostomus hastatus* (Pallas, 1767), and *Phyllostomus latifolius* (Thomas, 1901) (Williams and Genoways 2008; Reis *et al.* 2011).

*Phyllostomus elongatus* is intermediate, in size, between *P. hastatus* and *P. discolor*. Its measurements include: total length (head, body and tail) 99 to 115 mm; tail 14 to 27 mm; forearm 61 to 71 mm; and weight 30 to 57 g (see Nogueira *et al.* 2007). Mensural data, in addition to wing tip color, fur color, dental morphology, and size of maxillary incisors, can easily differentiate the species (Rodríguez-Posada and Sánchez-Palomino 2009). Other characters may also assist in the identification of *P. elongatus*, including long ears, larger than the head and with rounded edges, well-developed noseleaf with a pointed end, and calcar longer than the foot (Vieira 1942; Husson 1962).

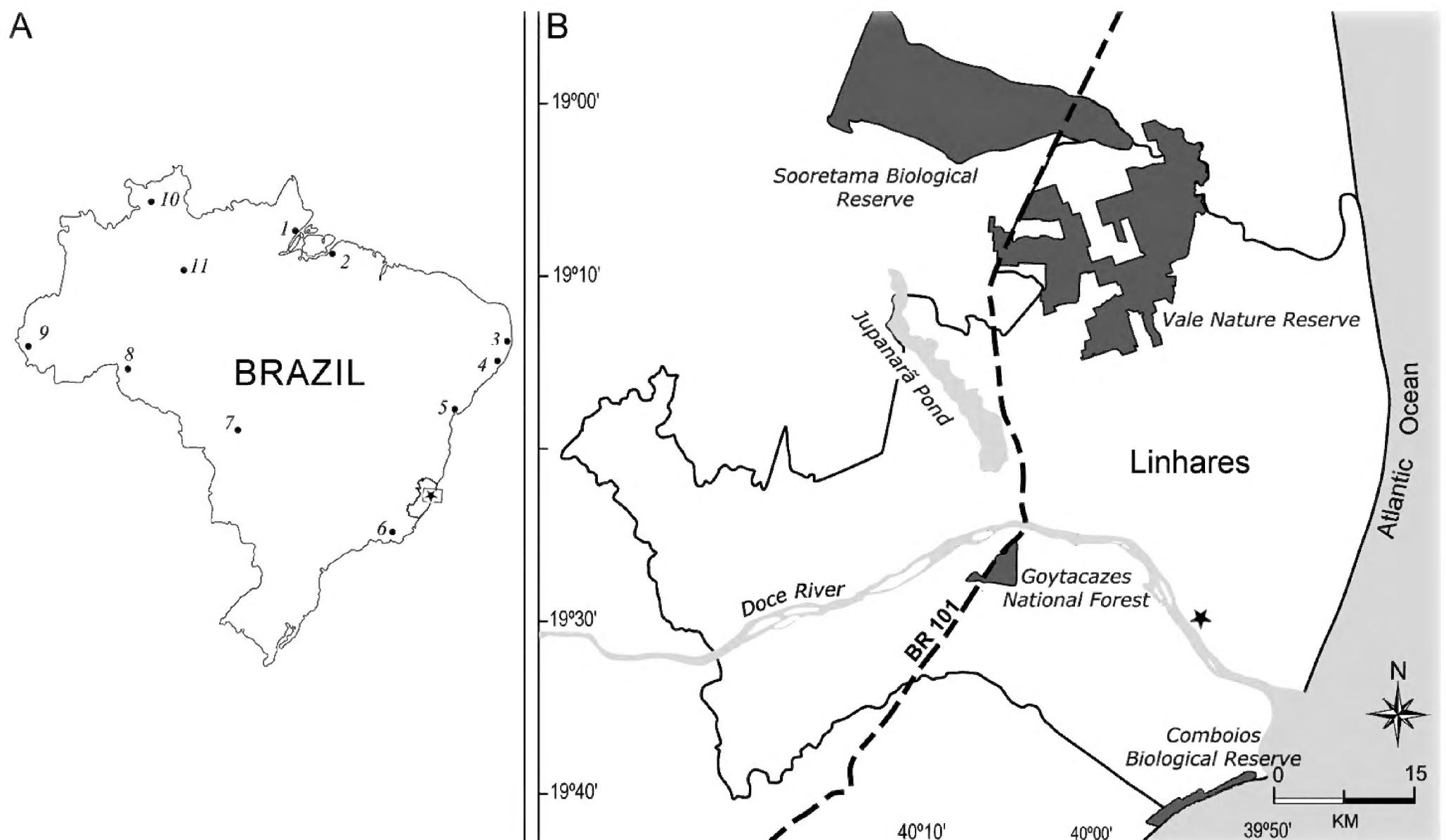
*Phyllostomus elongatus* is currently known from 11 Brazilian states: Acre, Alagoas, Amazonas, Amapá, Bahia, Mato Grosso, Pará, Pernambuco, Rio de Janeiro, Rondônia, and Roraima (Bernard *et al.* 2011; Tavares *et al.* 2008) (Figure 1). Marinho-Filho (1996) reported its occurrence in the state of Espírito Santo, but no supporting data for this record was provided or is available from more recent compilations (Moreira *et al.* 2008; Mendes *et al.* 2010; Moreira and Mendes 2010).

During a bat inventory in the Povoação Village (19°33'40" S and 39°48'45" W), northern margin of the Doce River, municipality of Linhares (Figure 1), we captured a male *P. elongatus* that represents the first record of this species for the state of Espírito Santo. This specimen was captured in July 2011, in a fragment of "cabruca" located in a tropical lowland rainforest area. The "cabruca" consists of a traditional system where the cacao (*Theobroma cacao* L., Sterculiaceae) is planted

under the native forest canopy. In this system, only 10% of the original forest canopy is maintained (Sambuichi 2002; Rolim and Chiarello 2004). The "cabrucas" keep a stratified structure of forests, ensuring the occurrence of many native animal species (Rolim and Chiarello 2004). For the "cabrucas" of Espírito Santo, we can highlight the maintenance of a non-dense canopy, based on tree species of Moraceae (Rolim *et al.* 2006), a family widely consumed by fruit bats (Pinto and Ortêncio-Filho 2006). The region is classified as Aw, according to Köppen's climate scale, with the dry season from April to September and the rainy season from October to March (Köppen 1948; Schneider and Teixeira 2001). The temperatures range between 24 and 26°C (Pezzopane *et al.* 2004).

Voucher specimen was collected under the SisBio's license 16752-1 and is deposited in the Mammal Collection of the Museu de Biologia Mello Leitão (MBML 3351). Cranial and body measurements were taken, in millimeters, according to Vizotto and Taddei (1973), as follows: forearm length 70.8; tibia length 27.7; thumb length 9.7; ear length 31.5; tragus length 6.6; calcar length 19.9; greatest length of the skull 31.7; condylobasal length 27.8; condylocanine length 26.5; braincase breadth 11.6; postorbital breadth 5.7; mastoid breadth 15.1; lower toothrow length 12.8; cingular-canine external breadth 8.1; breadth across molars 12.1; mandibular length 20.6; upper toothrow length 11.1; zygomatic width 17.5; interorbital width 9.1; palatal width 6.0; palatal length 12.6; and basal length 22.8.

The present record of *P. elongatus* increases the mammal list of the state Espírito Santo, which recently included a new species described from the region of Linhares (Nogueira *et al.* 2012). These new records reinforce the need of additional bat samplings in the Atlantic Forest of the Espírito Santo state, which still has poorly studied areas (Bergallo *et al.* 2003; Moreira *et al.* 2008; Mendes *et al.* 2010).



**FIGURE 1.** (A) Map with locality records for *Phyllostomus elongatus* in Brazil. The star refers to the new record and the circles refer to existing records, which are also marked by numbers, as follows: (1) Macapá, Amapá (Mok and Lacey 1980); (2) Utinga, Pará (Handley 1967); (3) Recife, Pernambuco (Souza-Lopes 1978); (4) Rio Largo, Alagoas (Vieira 1955); (5) Salvador, Bahia (Vieira 1955); (6) Teresópolis, Rio de Janeiro (Vieira 1955); (7) Rio Branco, Mato Grosso (Cabrera 1958); (8) BR-364, Rondônia (Marques 1989); (9) Parque Nacional da Serra do Divisor, Acre, (Nogueira et al. 1999); (10) Ilha do Maracá, Roraima (Robinson 1998); and (11) Manaus, Amazônia (Reis and Guillaumet 1983). (B) The place of the new record in Espírito Santo (marked with a star).

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